IV Year B.Tech. Bioinformatics I - Semester	L	T	P	To	C
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BI 411 FORENSIC SCIENCE (ELECTIVE - IV)

Course Description and Objectives :

This course deals with the basics of forensic science. The main objective of this course is to provide adequate knowledge to the students about the Organization set-up of forensic laboratories.

Course Outcomes :

Upon completion of the course, the students will:

1. Gain sufficient knowledge in the various methods of Investigation
2. Know the significance of Narco Analysis as an Inverstigative tool
3. Gain certain insights into the Criminal Profiling
4. Acquire background knowledge in the history and development of police as an institution
5. Know about the qualifications and duties of a forensic scientist
6. Be able to differentiate various types of DNA finger prints and their applications

Unit I : Introduction to the basics of Forensic science :

History and Development of Forensic Science, Definition of Forensic Science, Scope of Forensic Science, Need of Forensic Science, Basic Principles of Forensic Science, Tools and Techniques of Forensic Science.

Unit II : Organization setup of forensic laboratories :

Organizational setup of Forensic Science Laboratories, CFSL, FSL, GEQD, FPB, NICFS, Central Detective Training School, NCRB (Maintenance of Crime Records), NPA Mobile Forensic Science Laboratory, Branch of Forensic Science, Forensic Science : its International Perspective.

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Unit III : Methods of Investigation :

Modus Operandi and MOB and its role in Criminal Investigation, Methods of Investigation : Narco analysis :History, Importance as an investigative tool, methods as use of drugs, Hypnosis etc. Limitations and legal aspects. Ethics in Forensic Science.

Unit IV: Brain finger printing :

Concepts, History, Significance, method, future perspective of the technique, limitations. Criminal Profiling : Introduction, Importance, Profile of the victim and culprit, understanding *modus operandi*, investigative strategy, crime scene characteristics, criminal behavior on the internet, limitations. Various Police Organisations, Organisation of Police Station, Evolution of Police as an Institution, Role & Functions of Police,

Unit V: History and Development of Finger Print as a tool for Personal Identification :

Education of Forensic Science, Role of Media, Human Rights & Criminal Justice System. Duties of Forensic Scientist, Qualification of Forensic Scientist. Development of Finger Print as Science for Personal Identification, Type of Finger Prints, Classification of Finger Prints, Latent Finger Print, Causes of Formation of latent Finger Prints, Comparison of Finger Prints, ridge details. Presentation of Expert Evidence: Data, Reports, Evidence in the Court

Text Books :

1. Nanda, B.B. and Tewari, R.K. (2001) : Forensic Science in India : A vision for the twenty first century Select Publisher, New Delhi.
2. James, S.H and Nordby, J.J.. (2003) Forensic Science : An introduction to scientific and investigative techniques CRC Press, Barnett (2001): Ethics in Forensic Science.

Reference Books :

1. O'Hara & Osterburg : Introduction to Criminalistics, 1949, The MacMillan Co., 1964.
2. Osterburg : Crime Laboratory. Saferstien : Forensic Science, Handbook, Vol. I, II & III, Prentice Hall Inc. USA.

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